UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,224	12/04/2001	Dan Dolev	149.002	8419

7590 01/13/2005	**EXAMINER**
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ART UNIT	PAPER NUMBER
2127	

13th Floor
New York, NY 10005

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- Th MAILING DATE of this communication appears on th cover sh t with the corr spondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 December 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/9/02*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 15 are pending.

Claim Rejections - 35 USC § 101

2.   Claims 1 - 11 are rejected under 35 U.S.C. 101 because they are directed to non-statutory

subject matter.

3.   **Claims 1 - 11** are directed to method steps, which can be practiced mentally in

conjunction with pen and paper, therefore they are directed to non-statutory subject matter.

Specifically, as claimed, it is uncertain what performs each of the claimed method steps.

Moreover, each of the claimed steps, inter alia, <u>selecting, determining, directing, providing,</u>

<u>skewing, changing, resetting</u>, can be practiced mentally in conjunctions with pen and paper. The

claimed steps do not define a machine or computer implemented process [see MPEP 2106].

Therefore, the claimed invention is directed to non-statutory subject matter. (The examiner

suggests applicant to change "method" to "computer implemented method" in the preamble to

overcome the outstanding 35 U.S.C. 101 rejection).

Claim Objections

4.   Claims 2, 4 and 5 are objected to because of the following informalities:

   A.   **Claim 2** has an extra quotation mark at the end.

   B.   **Claims 4 and 5** have extra word such as "a" and/or "the".

   Appropriate correction is required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6.   Claims 5, 8 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

A.   The following terms lack of antecedent basis:

a.   "said skewed", in **claim 5**.

b.   "said other server", in **claims 9 and 10**.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1, 2, 7 - 11 and 14 - 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Choquier et al. (US 5,774,668, hereinafter Choquier) in view of Goyal (6,711,607).

9.   Regarding **claim 1**, Choquier discloses a method for directing a request to one server out

of a plurality of servers (abstract), comprising the steps of:

        selecting a server (fig. 6 and col. 15, lines 25 – line 50);

        determining whether said selected server has remaining capacity to handle the request

(col. 11, lines 14 – 29); and

        directing the request to said selected server, only if said server has remaining capacity to

handle the request (col. 11, lines 14 – 29 and col. 15, lines 25 – 50).

        Choquier teaches of selecting a server to handle a request but did not clearly disclose the

request involving an expected load. Nevertheless, Goyal discloses that before assigning the

task/request to be serviced/processed by one of the servers, a determination was made to

guarantee that the server has the efficient capacity resource (abstract, col. 3, lines 37 – 52). It

would have been obvious for one of an ordinary skill in the art, at the time the invention was

made, to incorporate Goyal's teaching with Choquier so that requests can be provided with

quality of service with the determining of the sufficient resource capacity.

10.   Regarding **claim 2**, as modified Choquier further discloses the step of:

        providing at least one token associated with each of the plurality of servers, and wherein

said step of selecting a server includes the step of selecting at least one token associated with

said server (Choquier: col. 10, lines 20 – 33, 58 – col. 11, line 29).

11.   Regarding **claim 7**, as modified Choquier discloses the step of changing the remaining

capacity to reflect the expected load if the request is directed to the server (Goyla: figs. 3a – 3c,

col. 3, lines 37 – 61, col. 5, lines 50 – 56).

12.   Regarding **claim 8**, as modified Choquier discloses the step of selecting another server if

said server does not have remaining capacity to handle the expected load (Goyla: col. 3, lines 50

– 61).

13.   Regarding **claim 9**, as modified Choquier discloses the other server is part of the same set

(Choquier: figs. 3 – 4).

14.   Regarding **claim 10**, as modified Choquier discloses the other server is part of a reserve

set (Choquier: col. 23, lines 17 – 24).

15.   Regarding **claim 11**, as modified Choquier discloses the calculation of average load of

the service group over a predetermined period of time (Choquier: col. 23, line 61 – col. 24, line

14) and the service map is automatically updated on a substantially periodic basis to reflect

changes in application server loads (Choquier: col. 29, lines 1 – 3). It would have been obvious

for one of an ordinary skill in the art, at the time the invention was made, to recognize the

updated of the availability of resource for a period is thus resetting the remaining capacity for

each time frame.

16.   **Claims 14 and 15** are rejected on the same ground as stated in claim 1 above.

17.   Claims 3 - 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choquier et

al. (US 5,774,668) in view of Goyal (6,711,607), as applied to claim 1 above, and further in view

of Primak et al. (US 2002/0010783, hereinafter Primak).

18.   Regarding **claim 3**, as modified Choquier did not clearly teaching the additional

limitation as claimed. Nevertheless, Primak discloses the probability of selecting a token

associated with one server differs from the probability of selecting a token associated with at

least one other server (page 2, paragraph 14 and page 3, paragraph 32). It would have been

obvious for one of an ordinary skill in the art, at the time the invention was made to incorporate

Primak's teaching together with modified Choquier to fulfill the request requirement accordingly

by efficiently utilize the availability resource as each server has different load, thus their ability

to handle incoming requests is not the same.

19.   Regarding **claim 4**, as modified Choquier discloses the step of providing a number of

tokens associated with each of the plurality of servers, wherein the number is proportional to the

load limitation of each of the servers (Primak: fig. 5, page 2, paragraph 14 and page 3, paragraph

32).

20.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choquier et al.

(US 5,774,668) in view of Goyal (6,711,607), as applied to claim 1 above, in view of Primak et

al. (US 2002/0010783, hereinafter Primak), and further in view of Bhaskaran et al. (US

6,601,084, hereinafter Bhaskaran).

21.   Regarding **claim 5**, modified Choquier did not clearly disclose the additional limitation

as claimed. Nevertheless, Bhaskaran discloses the step of skewing the probability of selecting of

at least one token associated with the server and the skewed probability being disproportionate to

the number of tokens associated with the server (fig. 9, col. 4, lines 29 – 38, col. 10, lines 11 –

43, col. 11, lines 51 – 65). It would have been obvious for one of an ordinary skill in the art, at

the time the invention was made, to incorporate Bhaskaran's concept of skewing the probability

of server selection to provide a dynamic load balancing and server fault tolerance for a plurality

of servers with monitoring the load on the servers to maintain a balanced load on the servers

(Bhaskaran: col. 13, lines 26 – 35).

22.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choquier et al.

(US 5,774,668) in view of Goyal (6,711,607), as applied to claim 1 above, and further in view of

Jain et al. (US 6,795,858, hereinafter Jain).

23.   Regarding **claim 6**, modified Choquier did not clearly disclose the additional limitation

as claimed. Nevertheless, Jain discloses the step of providing a number of tokens associated

with each of the plurality of servers, wherein said number is disproportionate to a load limitation

of each of the servers and the number is at least partly based on a priority of each of the servers

(abstract, col. 3, lines 45 – 52, col. 5, line 52 – col. 6, line 2, col. 7, line 41 – col. 8, line 7, line 63

– col. 9, line 18). It would have been obvious for one of an ordinary skill in the art, at the time

the invention was made, to incorporate Jain's teaching with modified Choquier so that server

selection can be performed base on the most importance metric as necessary.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
sale in this country, more than one year prior to the date of application for patent in the United States.

24.   Claims 12 – 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lu et al. (US

Pat. Application Publication 2002/0194350, hereinafter Lu).

25.   Regarding **claim 12**, Lu discloses a system for allocating requests among servers,

comprising:

        a plurality of servers (figs. 4 - 5);

        a first memory divided into entries, with at least one entry associated with each server

and including an indication of the server (fig. 10C, 7, paragraph 115);

        a second memory divided into entries, with at least one entry associated with each server

and including a representation of a remaining capacity of the server (page 8, paragraph 130, figs.

10C – 10D); and

        a selector for selecting from among the entries of the first memory (page 7, paragraph

117).

26.   Regarding **claim 13**, Lu discloses at least one other set of at least one server to which requests can be allocated if there is no remaining capacity in any of the plurality of servers (page 9, paragraphs 149 - 150).

Conclusion

27.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo
Examiner
Art Unit 2127

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January 7, 2005

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